

December 5, 2019

Mike Lanenga  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Transportation  
CDOT Permits: 1170636 (401-423 E. Grand Ave.)  
1157238 (620-636 N. St. Clair St.)  
N/A (42 E. Ontario St.)

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the removal for replacement of sidewalk, curbs, and gutters at 401-423 E. Grand Ave., 620-636 N. St. Clair St., and 42. E Ontario St. in Chicago, Illinois. The 42 E. Ontario location is just outside of the Lindsay Light Streeterville thorium monitoring area so no CDPH permit was required. Surveys were performed at this location due to its proximity to the required monitoring area.

The monitoring was performed by DJ Shaw on November 20 and 21, 2019. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126496) with attached Ludlum Model 44-10 2"x2" NaI Detector (w/ 6" collimated lead shield). The instrument was calibrated on October 18, 2019. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,102 counts per minute (cpm).

The average background count rate for these locations was determined to be 2,000 cpm.

#### Surface Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by scanning the sidewalk and curb surfaces prior to removal and again after removal to a maximum depth of 18" below ground surface. All concrete was loaded directly into a truck for disposal.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Forms. The count rates in the excavation ranged from 2,000 cpm to 3,200 cpm. No count rates were found at any time that exceeded the threshold limit of 7,102 cpm.

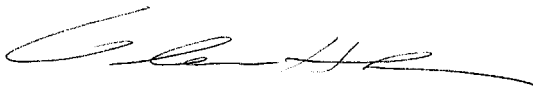
#### Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

I will be providing a copy of this report to both the City of Chicago Department of Public Health and US Environmental Protection Agency, as required.

Thank you for your assistance with this project. If you have any questions or need additional information, please call me at (815) 485-6161.

Sincerely,  
Stan A. Huber Consultants, Inc.

A handwritten signature in black ink, appearing to read 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President

401-423 E. Grand Ave. (McClurg and Grand) 11/20/19



Section 1

620-636 N. St. Clair St. (Ontario and St. Clair) 11/20/19



Section 1



Section 3

Section 2

42 E. Ontario 11/20/19

Section 1



42 E. Ontario 11/21/19

Section 2



Section 1



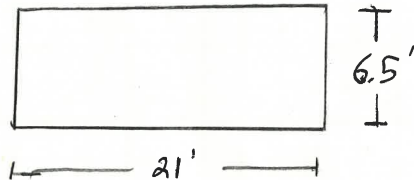
Survey Meter: Ludlum Model 2221

Serial: 126496

Cutoff: 7,102 CPM

- Please see Photos

\* McClurg \* Grand  
Section 1

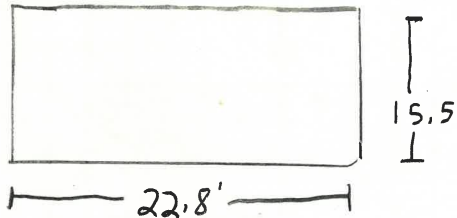


0-18" - 2300  
18-36" - 2800

\* Ontario \* St Clair

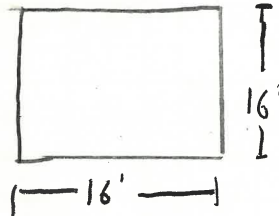
Section 1

0-18" - 2400  
18-36" - 2300



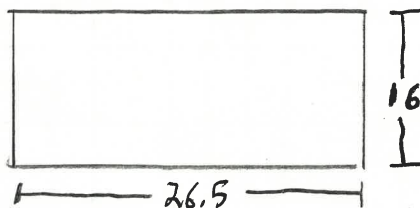
Section 2

0-18" - 2800  
18-36" 2800



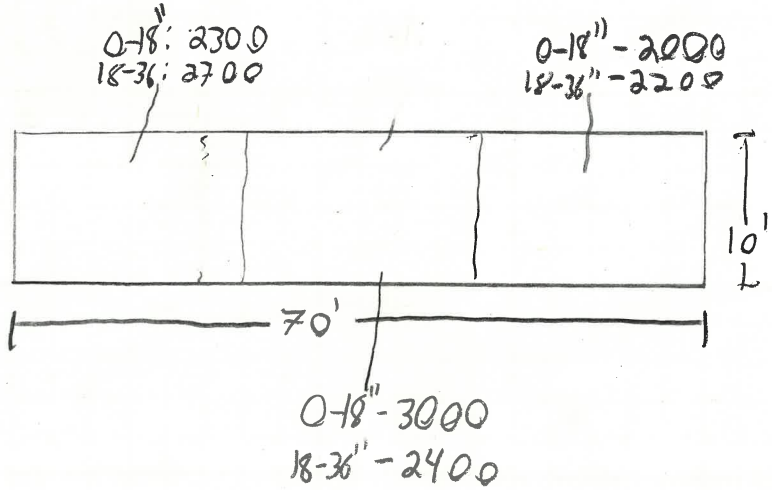
Section 3

0-18" - 2400  
18-36" - 2300



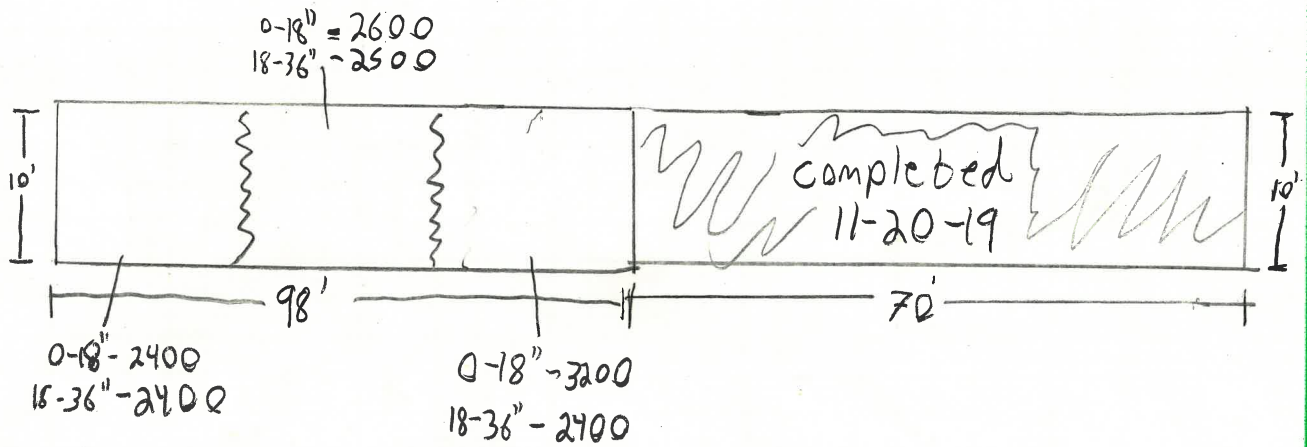
\* 42 E. Ontario

Section 1

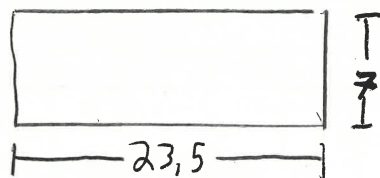


\* 42 E. Ontario

Section 1 continued



Section 2



0-18" = 2100  
18-36" = 2200